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THE AMERICAN SPECIFICATION IN EUROPE

A DISCUSSION OF FOREIGN PATENT OFFICE AND COURT PRACTICE WITH PARTICULAR REFERENCE TO THE INTERPRETATION OF SPECIFICATIONS AND CLAIMS IN GREAT BRITAIN AND GERMANY

By

LAWRENCE LANGNER

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INTRODUCTORY REMARKS.

Attorneys in this country are not generally aware of the legal complications arising from the use of the American type of specification in the foreign practice. In the paper which follows, I have set forth a few suggestions with a view to modifying the present style of writing specifications for the United States Patent Office, which suggestions, if adopted by United States Attorneys, will be the means of simplifying the prosecution of foreign patent applications to a considerable extent, and this without prejudice to the practice in the United States. In other words, I have endeavored to define a middle course between the United States practice and the European practice which will operate to the advantage of both and without sacrifice to either.

The industrial trend of the United States at the present time is towards international business, as evidenced by the constantly increasing number of American corporations established in Europe, and attorneys in this country find it continually necessary to give to the prosecution of foreign patent applications the same careful attention accorded to United States applications. I believe that the general adoption of my suggestions may be of material assistance in this direction.

I have pleasure in thanking my associates, Mr. A. E. White, A. I. M. E., of London, and Patentanwalt Georg Benjamin, of Berlin, for their valuable assistance and suggestions.

LAWRENCE LANGNER.

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New York City.

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THE AMERICAN SPECIFICATION IN EUROPE.

The results of attempts on the part of American inventors to secure adequate protection abroad, and particularly in Germany, has often given rise to speculation in the past as to whether or not there is a prejudice in Europe against inventions emanating from the United States. If prejudice exists at all, it is certainly not directed against American inventions, but it may be said with a great deal of truth that there is a strong prejudice in Europe against the American form of specification, and this fact is not as generally known and thoroughly appreciated as it ought to be in the interests of American inventors.

The responsibility for the prejudice against the American specification in Europe rests directly with the American attorney. He may employ the best foreign patent agents—he may give the fullest scope for individual attention to his cases—and yet he may be unsuccessful in securing foreign patents, or patents of the desired ambit. To enter the foreign field upon a proper basis, the American attorney must consider the foreign situation at the time of filing each U. S. application, and he must at that time give the same careful consideration to the foreign practice as he does to the domestic. Until this fact is realized—until there is an end to the practice of blindly prosecuting the U. S. application to allowance, and then rushing at a right angle into the foreign field—American attorneys may con-

tinue to expect trouble with their foreign applications.

It is generally recognized that when the foreign claims are in so-called American form, a foreign patent, if one be obtained at all, is in more or less of a hopeless condition—almost as hopeless as a U. S. patent with the English or German form of claims, were it possible to obtain one. This has led to the practice of turning over the preparation of the foreign claims to the foreign patent agent, and in this way all difficulties are apparently removed. Only apparently, however, for experience has shown that the real difficulties are not removed, but cloaked. And the inherent difference between the foreign practice and the U. S. practice is responsible for the fact that foreign claims tacked on to an American specification very often mean something quite different from what they say.

The line of demarcation between the specification and the claims which exists in the United States practice, is very faint in Europe. In some countries, such as France, the claims are frankly regarded as unnecessary. In other countries, such as England and Germany, they are merely a matter of form. A British patent with a claim for "The invention substantially as described in the specification" may be a perfectly good patent, and moreover a very broad patent, if the invention is broadly described. One of the functions of the foreign specification is to claim, and not only to claim, but to modify the claims. In other words, the foreign specification and claims are an integral whole; they must be read together and construed together. A narrow specification and a broad claim may give

only narrow protection. A broad specification and a narrow claim may sometimes give broad protection. The claims of an American specification play the leading part, and even the most conscientious of American attorneys, misled by the importance of U. S. claims, are inclined to think that so long as the foreign claims are broad, the specification is a matter of secondary consideration.

THE TYPICAL AMERICAN SPECIFICATION.

In order to arrive at an understanding as to what must be done by the American attorney to co-operate with the foreign patent agent in securing foreign claims, which, when construed as a whole with the specification, will be of the desired scope, it is necessary first to enquire into the trouble arising from an American specification having foreign appendages in the way of claims. The majority of U. S. attorneys regard the specification as a vehicle of disclosure, and moreover a disclosure of no more and no less than will support the claims. The best form of United States specification, following this rule, is that which closely describes the embodiment of the invention illustrated in the drawing, and upon which all the claims, broad and narrow, can be read; most American specifications commence with a brief statement of the art to which the invention relates, followed by a statement of the objects of the invention, a broad description of a preferred embodiment, and a specific description of this embodiment, which is illustrated in the drawings. Usually no attempt is made to dissociate the invention from its embodiment, and by "invention" here is meant the European conception

of invention—the conception that an invention is something quite distinct from its visible embodiment. It is important to realize very clearly just what this conception is, for reasons which will appear hereafter. A British case, the British Mutoscope Co. v. Homer (1901), 18 R. P. C., 177, is a good illustration of this conception. In this case certain patented mutoscopes were seized under distress from a personal licensee and sold, but the persons who acquired the articles by this sale were unable to use them, for although they were the owners of the material of which the mutoscopes were made, yet the inventive idea embodied in the operative apparatus was the property of the patentee. The entire European practice is based upon this conception of invention—that an invention is an idea, and can be embodied in any number of forms irrespective of the number of elements or constructional features.

To return to the U. S. specification under discussion: It is very rarely the case that any statement based upon such a conception of invention appears in the specification. In fact, as a general rule, the specification is a faithful description of the illustration, and it is only when the claims are considered that the real invention becomes apparent, or rather should become apparent. Such a specification, limited to a description of a single species to avoid a call for division, may be regarded as being substantially typical of a carefully drawn U. S. specification, the attorney having given all his attention to the requirements of the U. S. practice alone, although in eight cases out of ten, when an important invention is concerned, he knows full

well that foreign patents will also be required at some subsequent time.

Let us assume that specifications, such as that outlined above, are mailed with the drawings to patent agents in England, France and Germany, with instructions to prepare the claims in accordance with the preferred foreign practice. The foreign patent agent, if he be at all conscientious, will not attempt to frame the foreign claims for an important invention merely by construing a number of U. S. claims, for even the U. S. attorney himself knows little of the mysteries he has hidden in the carefully formulated sequence of words which define the scope of the invention according to American practice. Usually the U. S. attorney is requested to write a statement setting forth the gist of the invention, and this statement accompanies the application documents. With an understanding of the invention based upon this information, the foreign patent agent prepares the foreign claims.

THE GERMAN PATENT OFFICE PRACTICE.

Following the specification addressed to the German attorney, we generally find that some time is occupied in limiting the claims to a single invention; this happens in a great proportion of cases, owing to the fact that while any number of species may be claimed in a single German application, provided that they are all connected by and embody the same novel and patentable inventive idea, yet features which form part of the same machine or process but are functionally inter-related with, and developments of, the main inventive idea, cannot be included in a single application. This is almost the opposite of the American practice. Af-

ter the objections of the German patent office have been met in this respect, we may expect to receive an action from the German Examiner citing a few wholly irrelevant references, and stating that a patent cannot be granted for want of patentability, as it cannot be seen that any new technical effect is produced by the alleged invention. And notwithstanding the fact that a new technical effect is actually produced, it is not a matter for wonder that the German Examiner does not see it. The typical American specification may be an excellent description of a machine, for instance, but it certainly is not a description of an inventive conception involving a novel technical effect: It was never intended as such. In haste, the U. S. attorney writes a vivid statement of the advantages of the invention over the prior art. The German agent files this in the form of an argument in the German Patent Office. The examiner may then recognize that patentability exists. He may also—in a spirit of unwelcome generosity—propose a claim including most of the elements of the embodiment shown in the drawing. The U. S. attorney vigorously protests against this claim, often thinking it more restricted than it really is. The examiner, in reply to a request from the agent for the allowance of a broader claim, will reply that the broader claim merely represents a problem which is solved by the construction shown, and that as the invention consists in the construction which solves the problem, only a claim on the construction can be allowed. Almost in despair, the U. S. attorney shows that other constructions or modifications, not included in the wording of the claim proposed by the ex-

aminer, could also produce the same new technical effect, and that for this reason a broader claim should be allowed. The examiner replies that no such other constructions or modifications were described in the specification and that he can only take into consideration what was contained in the specification at the time of filing. He will probably also remark that the applicant is trying to cover every way of solving the problem, whether known or unknown. In many cases where the examiner does not himself propose a claim, he will object to a broad claim submitted by the applicant for the reasons set forth above. In fact, it may be stated as a general rule that where only one embodiment of the invention is described, the examiner will object to allowing a claim on the broad principle and a claim on the specific form (1004, p. 329 Bl Ignition pellet case). An appeal is filed, which may or may not be successful—success depending upon whether the Appeal Board decides that the inventor really has invented more than is described in the American specification. As such a decision must be based upon a benevolent, and even strained, construction of the specification, rather than upon the facts, it is hardly to be expected that in every case the Appeal Board will grant claims of the desired breadth of wording. Moreover, it is becoming increasingly difficult to secure the allowance of broad claims in Germany, not only because the responsibility for granting such claims rests very heavily upon the German Patent Office, and may be the cause of recrimination at a later date but also because the Courts have made it clear that the Patent Office has performed its duty if the claims allowed

clearly characterize the subject-matter of the invention, the scope of the claims being a matter for the Courts to decide (Sup. Court, Bl. 1910, p 157 Coke chute case). In other words, to be on the safe side, the German examiner adopts the attitude that the claim shall cover only the invention described, and he jealously resents any attempt to claim the invention in such manner as to include every possible infringement by the wording of the claim. This attitude of the German Patent Office is due to the present peculiar practice of the German Courts in regard to the interpretation of claims, and it is not a digression from the present subject to describe this practice of the German Courts, as the relation of the typical American specification to this practice will then be better understood.

THE GERMAN COURT PRACTICE.

The claims of a United States patent may be likened theoretically to the walls which enclose the monopoly area: these walls are rigid—on one side of them any member of the public is free to do as he pleases, and on the other side he stands within the monopoly area. The claims of a German patent—and to a lesser extent the claims of a British patent—are elastic. They stretch and contract according to a variety of circumstances, such as the state of the art and the merits of the invention. They may mean ever so much more than they say, or ever so much less, depending upon the particular circumstances involved. The German Courts have adopted the attitude, which is undoubtedly a reasonable one, that the inventor cannot at the time of making his application, or even at a later date,

be expected to know every possible way whereby his patent can be infringed, and that it is an impossible task to attempt to frame a claim worded in such a way as to cover all possible infringements, known or unknown. United States attorneys are supposed to be able to draft such claims, but the cumbersome methods necessary to achieve success do not recommend themselves to the foreign practice. So the German Courts, recognizing that claims are but poor weak instruments, step in and give them a helping hand by way of benevolent construction whenever it is possible to do so. And to assist in giving this construction, the Courts must be able to find a logical basis for an otherwise sentimental decision in favor of the patentee. This basis can generally be found in a foreign specification scientifically drafted with the foreign practice in view, but is more often missing than not in the typical American specification. The basis for a broad interpretation of a narrow claim, apart from the state of the art, is the tone of the specification as much as its wording. A dominating note of breadth should be present, evidenced by a broad statement of the inventive idea from varied aspects, and the inclusion of a description of a number of embodiments or species. Assuming a meritorious invention, and an infringer who skilfully avoids the wording of the claims, the Courts will pounce upon such broad statements in the specification and will interpret the claims in view of them. One is almost tempted to say generally of the German practice, that if the attorney takes care of the specification, the claims will take care of themselves. But this is perhaps going too far. If an invention is dis-

closed, but not claimed, it will be very difficult to bring it within the monopoly area by "construction."

All this presupposes that the Judge deciding a patent suit shall have a broad understanding, not only of the technical matters involved, but also of the legal principles laid down by the German decisions as to construction or interpretation. But German judges are only a little more nearly infallible than the judges of other countries—it is neither safe nor wise to leave too much to their imagination. It may be stated, as the safest rule, that, as in America, the broader the claim the better the patent, provided that the claim is not too broad. But the German examiners, wishing to avoid the responsibility of granting broad claims, are generally only willing to allow claims as limited as possible having regard to the disclosure, leaving it to the Courts to give the limited claims a broad construction if they are entitled to such construction.

Without question, it is in the best interests of the patentee to secure the broadest possible claims from the German Patent Office, and the American specification is a decidedly unsatisfactory medium for accomplishing successful results in this direction. To secure broad claims, we must be able to show the examiner, from the specification itself, that the invention is capable of embodiment in a variety of forms, and that any claim which does not read on each or all of these embodiments is too narrow, having regard to the disclosure. In this way, arguments can be based upon the fact that a narrow claim does not cover all the aspects of the invention disclosed, and such arguments are usually successful.

Having summarized the troubles caused by the American specification in Germany, we may deal with the situation in Great Britain where conditions are not quite so difficult.

THE PRACTICE IN GREAT BRITAIN.

The British patent system, so far as the interpretation of specifications and claims is concerned, may be regarded as a compromise between the United States and German practice, with leanings towards the latter. The equity rather than the letter of the claims is observed by the Courts, and the construction of the claims is dependent upon the specification to a marked extent in case of doubt. It may be said that every part of the English specification and claims has a relative meaning, depending upon the meaning of every other part of the specification and claims. The British patent office does not object to an attempt to define the scope of protection by the claims, so long as the formal rules as to multiplicity of claims are observed, and it is not at all safe to expect the British courts to give a claim a broad construction when it is worded narrowly. In this respect the practice more closely approximates that of the United States than the German practice. Thus in the case of Nobel's Explosives Co., Ltd., v. Anderson (1894, 11 R. P. C., 128) the judge stated that "in order to make out an infringement it must be established that the alleged infringer is taking the invention claimed by the patentee, not the invention which he might have claimed if he had been well advised or bolder." The British courts, in interpreting the claims, can only stretch them in case of doubt as to their meaning.

If it is clear that the claims are limited, then they will not be interpreted broadly simply because the patentee has elected to make a present of the broad aspect of his invention to the public. To avoid danger of adverse construction of his claims by the Courts, the skilful British patent attorney attempts to pad out the specification with statements which can be read in two ways, both broadly and narrowly, and these statements are used to confuse the judge should the patent be litigated. Immediately the question of doubt arises, the rule of benevolent construction is applied to the claims, this rule being that where two or more constructions are equally tenable, the court will adopt the one which will give validity to the patent (Automatic Weighing Machine Co. v. Knight, 1889, 6 R. P. C., 307). While the typical American specification, when appearing before the British Courts, has been known to confuse by its terminological complexities, the confusion is not in the right direction when it does not lie in the statement of the nature of the invention. (At this point, anticipating criticism of my views as to causing "confusion," I know that it is fashionable for writers on British Patent Law to advise that the specification and claims should be as clear "as possible." It is just the difference between what is possible and what is not. The German Courts recognize that it is not possible for the claims to include in terms every infringing device, and they go outside the claims and look at the invention itself. Until the British Courts frankly adopt this attitude, towards which they have leanings only, it will always be necessary to take advantage of the rule of benevolent construction.) Ac-

cording to Sec. 2 of the British Patents Act of 1907, there must be included in every specification a statement of the nature of the invention, and by "nature of the invention," according to the British use of this term, is meant the inventive idea apart from its visible embodiment. Unfortunately, the laxity of the British Patent Office is such that patents are often issued with narrow statements of the nature of the invention, and broad claims. Where the specification is narrow, and the judge has to interpret the broad claims by the narrow specification, there is a danger that the claims will be construed more narrowly than was intended, and this is a danger to which American specifications are particularly susceptible.

GREAT BRITAIN AND THE INTERNATIONAL CONVENTION.

The difficulties caused by the American specification in Great Britain are aggravated if the application is filed under the provisions of the International Convention, and in view of the practice dating from medieval times and existing in England at the present day—the practice of granting the patent to the first rogue who may bring the invention into the country, irrespective of how he acquired it—most United States attorneys now make it a rule to file under the Convention, so that the conditions hereinafter mentioned are read and recurrent ones.

The interpretation placed by Great Britain upon the International Convention, involving as it does the antedating of the British patent to the date of the first foreign application upon which it is based,

has led to the requirement on the part of the British Patent Office that the invention protected by the British patent shall be the "same" as that of the foreign specification. In actual reality, the invention need not be the "same," so long as it is narrower than the invention claimed in the American specification. But suppose the inventor tries to secure claims which are broader than the claims originally filed in the U. S. Patent Office. It often happens that the original U. S. claims are too narrow, or are directed to an aspect of the invention which is not of such value as another aspect disclosed subsequent to the filing of the U. S. application. It is permissible, according to the United States practice, to broaden the claims after the application has been filed (Walker on Patents, page 122), and the United States attorney amends the claims in this respect in due course if necessary. However, on filing the application in Great Britain under the Convention with claims corresponding to the broader or different aspect of the invention, the British examiner objects to them on the ground that they claim an invention different from that claimed in the U. S. application as originally filed. This objection is generally supported by the Appeal Officers of the Patent Office, if the specification does not contain any statement of the inventive idea in such wide terms as to support a contention that while the claims of the British application were not originally contained in the United States application, yet the subject matter of the British claims was clearly foreshadowed in the original U. S. specification. Experience shows that the British examiner will seldom accept the

responsibility of allowing claims differing in scope or subject from the claims originally filed in the United States Patent Office. As a safeguard against difficulties of this kind, it might be well to file with the United States application a claim of the type known as the British omnibus claim, which may subsequently be relied upon to prove to the British examiner that matter described in, but not claimed by, the ordinary American claims, was covered by the omnibus claim. Having served its purpose, the informal omnibus claim may then be cancelled out of the American application.

THE PRACTICE IN FRANCE.

The difficulties encountered by the American specification in France are more problematical and rarer than in Great Britain and Germany. So far as the Patent Office is concerned, no objections are made as to the form or subject-matter of the application. However, the American specification often causes trouble even in the placid interior of the French Patent Office, owing to the French rule curtailing the length of the specification, and of the offenders against this rule, fully nine out of ten are Americans. It is well known that the French specification contains no claims, and that the patent is held valid for so much of the invention as is novel and patentable. In other words ,the Patent Office proceedings are transferred to the Courts, and the Courts decide not only the scope of the invention but also the question as to whether the alleged infringer is within its scope. It is not necessary to dwell on the rules of interpretation of the French Courts, but let us assume that a typical United

States specification, without claims, is placed before an American attorney, who will be requested to state what is the part for which protection is desired. He would, in the generality of cases, say, "I have read this through, but what is the invention?" The French Courts have to make the same enquiry. The typical U. S. specification usually states that the invention consists in the novel construction and combinations of elements described in the specification and more particularly pointed out in the claims. But the American specification generally does not point out the "invention," and without the claims it is, more often than not, impossible to ascertain just wherein the invention lies. Therefore it will be realized that French specifications which are mere translations of American specifications are likely to be misunderstood or construed narrowly, if the judge cannot tell what is constructional only and what is the real invention.

COMPLEX SPECIFICATIONS.

It may also be said, speaking generally, that foreign examiners are much antagonized owing to the extremely lengthy specifications filed abroad in respect of American inventions, as it takes up a great deal of their time in reading matter which seems to them to be unnecessary.

The conception that the specification is addressed to the skilled workmen exists in Europe as well as in America, but we in America who write specifications have no very great opinion of the intelligence of the skilled workman. It is for more true to say of the average American specification that it is written for the layman who is unable to read a

drawing without having every part described. Such detailed descriptions are not really necessary in the U. S. practice, and could easily be avoided; in fact, some of the leading American attorneys are now modelling their specifications on the lines of English specifications with a great deal of satisfaction. When complex descriptions form part of a British and German application, they annoy the examiner by imposing an additional burden of work upon him when he is already overworked, and his whole attitude is likely to become prejudiced when he contracts the voluminous specification prepared by the American attorney with the short and succinct specification of the foreign attorney. The golden rule for the foreign specification is—the shorter the better.

SUMMARY.

Summarizing, it has been shown that the American specification is a source of trouble in Europe because the function of a specification in Europe is to point out the invention itself, in addition to describing a practical working embodiment.

It is submitted that the U. S. attorney can avoid the majority of these objections by adopting, at the time of preparing specifications for filing in the U. S. Patent Office, the following simple rules, which, it is thought, make not only for an improvement in the conditions under which patent applications for American inventors are prosecuted abroad, but will also be of some assistance in the practice before the U. S. Patent Office.

SUGGESTED MODIFICATIONS OF THE U. S. PRACTICE.

(1) The United States specification should contain a full statement of the inventive idea or invention, viewed as distinct and apart from its embodiment. For instance, in the case of the first application for an automatic breech loading gun, the specification might contain a statement to the effect that, according to the invention, the force of recoil is utilized to load the gun. This statement should be broad and quite functional, if possible, omitting a reference to any of the elements which are employed to carry the invention into practice. It is preferable to precede this statement by another statement as to the problem to which the invention is directed. Both these statements should be contained in the original United States application, and subsequently removed if desired.

The inclusion of a functional statement such as that outlined above may be of assistance to American attorneys in the United States practice, as the preparation of this statement gives an opportunity of defining the scope of the invention from the functional standpoint, and viewed from this standpoint the invention often presents aspects which can form the basis of important United States claims, and which would not be apparent to the attorney in the ordinary way.

(2) The specification should contain as many descriptions of modifications as possible, subject to what follows. Those modifications need not necessarily be illustrated. It must be remembered, however, so far as the inclusion of descriptions of modifications is concerned, that it is bad practice in

the United States to disclose a valuable modification or species in incomplete terms, but the modifications referred to need not be the valuable ones. For every preferable way of carrying out an invention, there are generally two less practical ways. After having given the preferable way, why not give the others? Of course, the U. S. Patent Office will call for the cancellation of these modifications if they are not illustrated, and having served their purpose, they may be cancelled. There are of course some cases where it would be most inadvisable to disclose species as suggested above, and in applying this suggestion, the nature of the invention itself must be carefully considered. Generally speaking, the broader the invention, the safer it is to disclose a number of species.

(3) When the inventor has actually invented a number of workable species of a valuable nature, do not file separate United States applications for them, but include them all in one United States application and divide this application subsequently. Under the practice prevailing in all countries with the exception of the United States and Canada, a number of species can be included in a single application, and in filing under the Convention it simplifies matters considerably to base the Convention applications upon a single United States application. Moreover, in Great Britain, Italy, British colonies and some other countries, it is not possible to combine a number of United States applications in a single application under the Convention. For instance, in the case where five species are claimed in five U. S. applications, five applications are required in the above countries, where one only might

have been sufficient were this rule observed. There is a further important reason for observing this rule. In the case where four or five applications upon species are filed simultaneously in Germany, one of the applications having claims broad enough to cover all the species of the other applications, the examiner is apt to misunderstand the broad nature of this application, seeing that it describes one species only, whereas were the five species contained in a single application, he could not fail to appreciate the underlying feature common to them all, and would probably grant a broad claim.

Machine, method and product may also be advantageously claimed all together in a single United States application for the same reasons as those given above.

(4) File an omnibus claim with the United States application. The following is a special form which will be found to be particularly suitable:

"The features of novelty substantially as described and illustrated."

(5) Make the specification as short as possible. European attorneys, for the most part, have discarded the practice of describing a machine in detail first, and then its operation. A good specification writer can generally describe not only the parts, but also the operation of the parts, at the same time, so that no independent description of the operation is necessary, and the specification is greatly reduced in length.

The United States patent attorney, by observing these rules, will to some extent ensure that his specification will receive better treatment when it comes before the foreign patent offices and courts,

and this without prejudice to the home situation. It is therefore hoped that these remarks will not only lead to a better understanding and realization of conditions which are prejudicial to the foreign interests of American inventors, but will also result in the removal of some of them.

In the appendix, the specification given on pages 70-72 of the U. S. Rules of Practice has been rewritten along the lines indicated above, the amendments being shown in italics. A criticism of the specification, from the European standpoint, is also offered.

APPENDIX A.

THE AMERICAN "TYPE" SPECIFICATION GIVEN IN THE U. S. PATENT OFFICE RULES OF PRACTICE, AMENDED IN ACCORDANCE WITH FOREGOING RULES.

My invention relates to improvements in meat-chopping machines in which vertically reciprocating knives operate in conjunction with a rotating chopping block; and the objects of my improvement are, first, to provide a continuously lubricated bearing for the block; second, to afford facilities for the proper adjustment of the knives independently of each other in respect to the face of the block; and third, to reduce the friction of the reciprocating rod which carries the knives.

In accordance with one feature of my invention, I utilize the rotating movement of the block, or of parts associated therewith, to carry lubricating medium into the bearing and to distribute it in said bearing. Another feature of my invention consists in providing adjusting devices whereby each knife may be adjusted vertically. A further feature of

my invention consists in the provision of an anti-friction device so associated with the reciprocating rod carrying the knives that said rod can reciprocate freely and without friction.

I attain these objects by the mechanism illustrated in the accompanying drawing, in which

Figure 1 is a vertical section of the entire machine; Fig. 2 a top view of the machine as it appears after the removal of the chopping block and knives; Fig. 3, a vertical section of a part of the machine on the line 12, Fig. 2, and Fig. 4, a detailed view in perspective of the reciprocating cross-head of its knives.

Similar letters refer to similar parts throughout the several views.

(The table or plate A, its legs or standards BB,) (and the hanger *a*, secured to the underside of the) (table, constitute the framework of the machine.) In the hanger *a* turns the shaft D, carrying a fly-wheel E, to the hub of which is attached a crank *o*, and the crank-pin *p*, connected by link *b*, to a pin passing through a cross-head G, and to the latter is secured a rod H, having at its upper and cross-head G, and to the latter is secured a rod H, having at its upper end a cross-head I, carrying the adjustable chopping knives *d d*, referred to hereinafter.

The cross-head G, reciprocated by the shaft D, is provided with anti-friction rollers *e e*, adapted to guides *f f*, secured to the underside of the table A, so that the reciprocation of this crosshead may be accompanied with as little friction as possible.

To the underside of a wooden chopping block J is secured an annular rib *h*, adapted to and bearing in an annular groove *i* in the table A(see Figs. 1

and 2). This annular groove or channel is not of the same depth throughout, but communicates at one or more points (two in the present instance) with pockets or recepticles *j j* wider than the groove and containing supplies of oil, in contact with which the rib *h* rotates, so that the continuous lubrication of the groove and rib is assured. The rod H passes through and is guided by a central stand K, secured to the table A, and projecting through a central opening in the chopping block without being in contact therewith, the upper portion of the said stand being contained within a cover *k,* which is secured to the block, and which prevents particles of meat from escaping through the central opening of the same.

The cross-head I, previously referred ,to, and shown in perspective in Fig. 4, is vertically adjustable on the rod H, and can be retained after adjustment by a set-screw *x,* the upper end of the rod being threaded for the reception of nuts, which resist the shocks imparted to the cross-head when the knives are brought into violent contact with the meat or the chopping-block.

The knives *d d* are adjustable independently of each other, and of the said cross-head, so that the coincidence of the cutting-edge of each knife with the face of the chopping-block may always be assured.

I prefer to carry out this feature of my invention in the manner shown in Fig. 4, where it will be seen that two screw-rods *m m* rise vertically from the back of each knife and pass through lugs *n n* on the cross-head, each rod being furnished with two nuts, one above and the other below the lug through

which it passes. The most accurate adjustment of the knives can be effected by the manipulation of these nuts.

(A circular casing *p* is secured to the chopping-) (block, so as to form on the same a trough P for) (keeping the meat within proper bounds; and on) (the edge of the annular rib *h*, secured to the bot-) (tom of the block, are teeth *r*, for receiving those of) (a pinion *q*, which may be driven by the shaft D) (through the medium of any suitable system of) (gearing, that shown in the drawing forming no) (part of my present invention.)

(This shaft D may be driven by a belt passing) (round the pulley s, or it may be driven by hand) (from a shaft W, furnished at one end with a) (handle *t*, and at the other with a cogwheel R,) (gearing into a pinion on the said shaft D.)

(A platform T may be hinged, as at *w*, to one) (edge of the table A, to support a vessel in which) (the chopped meat can be deposited. The means) (by which it may be supported are shown in full) (lines, and the most convenient method of dis-) (posing of it when not in use is shown in dotted) (lines, in Fig. 1.)

It will be obvious to those skilled in the art that other constructions might be devised without departing from my invention. For example, the pockets containing the oil might be located at the sides of the bearing groove i, although I prefer to use the arrangement hereinbefore described. Again, the aforesaid adjustment of the knives might be produced by means of wedging devices in place of the nuts c. The anti-friction rollers might be also replaced by lubricated cylindrical bearing surfaces.

I prefer, however, to use the construction described and illustrated.

I am aware that prior to my invention, meat chopping machines have been made with vertically-reciprocating knives, operating in conjunction with rotating chopping-blocks. I therefore do not claim such a combination broadly; but I claim:

1. The combination in a meat-chopping machine, of a rotary chopping-block having an annular rib, with a table having an annular recess and a pocket communicating with the said recess, all substantially as set forth.

2. In a meat-chopping machine, the combination of a rotary chopping-block with a reciprocating cross-head carrying knives, each of which is vertically adjustable on the said cross-head independently of the other, substantially as described.

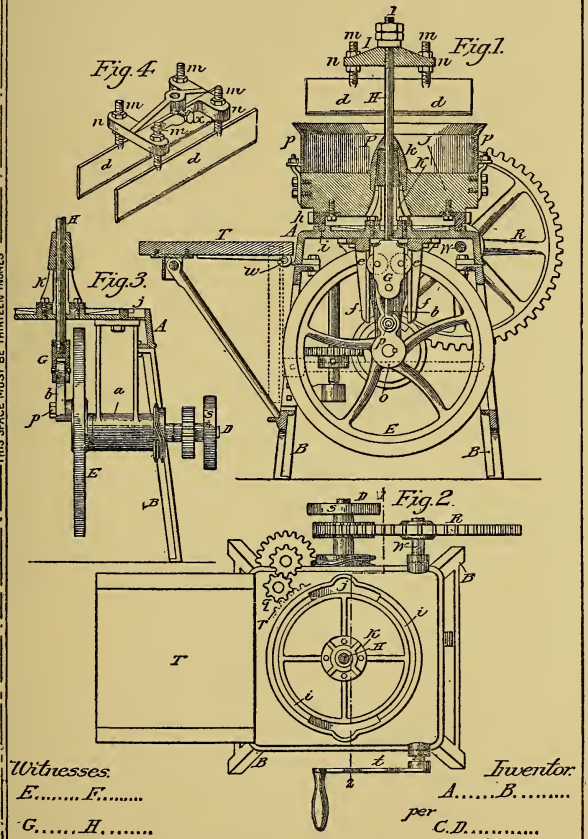
3. The knife *d*, having two screw-rods *m m*, attached to its back, substantially as shown, for the purpose specified.

4. The combination, in a meat-chopping machine, of the reciprocating rod, carrying the knives, the cross-head secured to the said rod, and having anti-friction rollers, with guides, adapted to the said rollers, all substantially set forth.

5. *The features of novelty substantially as described and illustrated.*

THE SIZE OF THE SHEET MUST BE EXACTLY
10 x 15 INCHES. SEE RULE 52. (2).

THIS SPACE MUST BE THIRTEEN INCHES



Witnesses.
E..... F.....
G..... H.....

Inventor.
A..... B.....
per
C.D.....
Attorney.

THIS SPACE MUST BE EIGHT INCHES

APPENDIX B.

CRITICISM OF THE U. S. PATENT OFFICE "TYPE" SPECIFICATION FROM THE EUROPEAN STANDPOINT.

(1) *The Specification.* The bracketed portions are superfluous, describing parts which form no part of the invention, and the operation of which can be clearly understood from the drawing. The reference letter *p* is used to indicate two different parts.

(2) *The Drawing.* The parts are shaded too heavily. Fig. 4 is unnecessary.

(3) *Multiplicity of Invention.* According to British and German practice, three inventions are involved. There is no relation between the lubrication of the blocks, the adjustment of the knives, and the anti-friction bearing for the reciprocating rod. Three applications would be required to cover these features independently in Germany and Great Britain.

(4) *Subject-matter.* It is highly improbable that claims 2, 3 and 4 cover patenable subject-matter, as the knife adjustment and the anti-friction guides are common constructional features in general use in machinery; it is possible, though doubtful, that invention might exist in the lubricating device for the block, but if a rotating device was used prior to the invention for picking up oil in the same manner in a different type of machine, then no invention will be present. Should this feature be novel, however, then it is wrongly claimed; it should properly be claimed broadly as a self-lubricating bearing applicable for use with all classes of machinery.

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